

REMARKS

Claims 1-44 are pending in this application. By this Amendment, claim 1, 4, 5, 7, 13, 22-27, 29, 31, 32, 39 and 40 are amended. No new matter is added. Reconsideration of the application is respectfully requested.

Applicants appreciate the courtesies shown to Applicants' representative by Examiner Castro in the July 14, 2005 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

I. Applicants Interview Summary

During the personal interview, Examiner Castro indicated that the "operating state" of claims 1, 39 and 40 may be broadly construed to indicate any state or condition of an engine. Therefore, Examiner Castro asserted that changes in one engine parameter may result in different operating states.

While Applicants respectfully disagree that the phrase "operating state" can be reasonably be considered to be based on one engine parameter, Applicants amend claims 1, 39 and 40 to recite "each operating state being determined based on at least two parameters for which compliance is to be established" to clarify the features of the claims and to advance prosecution of the application.

Operating states for establishment of compliance are set as points on a map of parameters for which compliance is to be established. See step 300 of Fig. 2, Figs. 4 and 5, and paragraph [0028] of the specification. For example, operating states may be set as map points that are determined by an engine speed N and a fuel injection amount Q. See Fig. 5, and paragraph [0028] of the specification. It is respectfully submitted that such amendments do not narrow the claims because such amendments only make explicit that which was implicit in the pending claims in light of the specification.

Applicants also amend the claims to replace "means" with "--device--" to clarify the features of the claims. The claims are not narrowed by such amendments.

II. Allowable Subject Matter

Applicants gratefully acknowledge that the Office Action indicates that claims 11, 12 and 33 include allowable subject matter.

III. Rejections Under 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 27-29 under 35 U.S.C. §112, second paragraph, as indefinite. Specifically, the Office Action asserts that there is insufficient antecedent basis for the feature "evaluating means" in claims 27 and 29. Claims 27 and 29 are amended only to provide proper antecedent basis for "evaluating means." Accordingly, claims 27 and 29 are not narrowed by these amendments.

The Office Action also asserts that claim 28 is indefinite because it is uncertain how output values have overall target values. The specification indicates that compliance target values of the amount of NO_x, the amount of particulate, the amount of hydrocarbons, the amount of CO, and the amount of fuel consumption are made the cumulative values, i.e., the overall target values, when running in the test mode. See at least page 8, paragraph [0021] and page 12, paragraph [0034] of the specification. Therefore, the overall target values are the cumulative values of the compliance target values of certain output values.

As asserted by Applicant's representative in the personal interview, the compliance target values of the remaining output values, e.g., the combustion noise and the concentration of smoke, are made the target values in the individual compliant operating states. See at least page 8, paragraph [0021] and page 12, paragraph [0034] of the specification. Because the compliance target values of the remaining output values, e.g., the combustion noise and the concentration of smoke, are not made the cumulative values, the compliance target values of the remaining output values do not have overall target values. See page 13, paragraph [0035]

of the specification. Therefore, the specification provides support for the feature of output values, e.g., the remaining output values, not having overall target values.

For at least the reasons discussed above, the claims provide proper antecedent basis and the specification clearly describes the feature of output value not having overall target values. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

IV. Rejection Under 35 U.S.C. §102(b)

The Office Action rejects claims 1-10, 13-32 and 34-44 under 35 U.S.C. §102(b) over Japanese Patent Application Publication No. JP 2002-138889 to Shigeki et al. ("Shigeki"). Applicants respectfully traverse that rejection.

Shigeki does not disclose an automatic compliance device, an automatic compliance method and an automobile enabling onboard establishment of compliance including "compliant operating state determining means for determining a plurality of operating states for establishing compliance, each operating state being determined based on at least two parameters for which compliance is to be established, and parameter initial value determining means for determining initial values of a plurality of parameters for control of the engine operation for each operating state for establishment of compliance," as recited in independent claims 1, 39 and 40.

The Office Action generally alleges that Shigeki discloses an automatic conformity device including a compliant operating state determining means, a parameter initial value determining means, a compliance target value determining means and a parameter complying means. Although the Office Action alleges that the entire Shigeki reference disclose all features of claims 1, 39 and 40, the Office Action does not provide specific support for such features. Notwithstanding these assertions, Shigeki does not teach or suggest a compliance operating means for determining a plurality of initial operating states for which each

operating state is determined based on at least two parameters in which compliance is to be established and a parameter initial value determining means for determining initial values for each operating state, as set forth in claims 1, 39 and 40.

As asserted by Applicant's representative in the personal interview, Shigeki teaches a control device that automatically performs compliance work for input-control parameters of vehicles or an engine. See Abstract, and paragraph [0004] of Shigeki English translation. The input-control parameter and output value combination are defined, and feedback control of each input-control parameter is carried out simultaneously in an attempt to achieve the output target value for each input-control parameter. See Shigeki English translation paragraph [0040] and [0041].

Shigeki also teaches that the combinations of output values and the engine's input-control parameters are performed in advance of injection of a main fuel. See Shigeki English translation paragraph [0038]. In other words, one parameter giving the greatest effect upon one output value is set in advance of main fuel injection. See pages 1 and 2, paragraph [0004] of the present specification. Therefore, the combination is set in only one operating state, i.e., the state in advance of main fuel injection. However, setting the combination of output values and parameters in advance of the injection of a main fuel may be difficult to find compliance values of the parameters for several reasons.

For example, when an operating state of the engine changes, the parameters having the greatest effects on the output values may change accordingly. See page 2, paragraph [0005] of the present specification. Also, when one parameter changes, some output values may approach the target output values while other output values may deviate away from the target output values. See page 2, paragraph [0005] of the present specification. Therefore, it may be difficult to find compliance value of the parameters in which all output values approach the target output values. See page 2, paragraph [0005] of the present specification.

The automatic compliance device, the automatic compliance method and the automobile enabling onboard establishment of compliance of claims 1, 39 and 40 includes a compliant operating state determining means for determining a plurality of operating states for establishing compliance. As a result, compliance of all parameters may be reliably established.

As discussed above, Shigeki teaches setting one parameter giving the greatest effect upon one output value in advance of main fuel injection. Shigeki does not teach or suggest compliant operating state determining means for determining a plurality of operating states. Therefore, Shigeki cannot be reasonably considered to teach or suggest determining initial values of a plurality of parameters for each operating state. Because Shigeki does not take into account various operating states of the engine, Shigeki does not provide the advantage of reliably establishing compliance of all parameters. For at least these reason, Shigeki does not teach or suggest the automatic compliance device, the automatic compliance method and the automobile enabling onboard establishment of compliance of claims 1, 39 and 40.

Therefore, claims 1, 39 and 40 are patentable over Shigeki. Claims 2-10, 13-32 and 34-38 and 41-44 variously depend from claims 1 and 40, and thus are also patentable over Shigeki for at least the reasons discussed above, as well as for the additional features they recite. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-44 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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